

### **REMARKS**

Claims 1-36, including independent claims 1 and 19 remain in the application. Claim 19 stands objected to under 37 CFR §1.75(a), as failing to particularly point out and distinctly claim the subject matter which the applicant regards as his invention or discovery. Claims 1-18 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Claims 19-31 and 33-36 stand rejected under 35 USC §102(e) as being anticipated by U.S. Patent No. 6,842,638 to *Suri et al.* Claims 1-13 and 15-18 stand rejected under 35 USC §103(a) as being unpatentable over *Suri et al.*

Independent claim 1 has been amended to remove the language “without having first determined a center point of each vessel” to overcome the rejection under 35 U.S.C. §112, first paragraph. Claim 1 has also been amended to recite a parallel region specifying unit which specifies a pair of parallel regions, a parallel region extraction unit which extracts data from the parallel regions, and a marching direction determination unit for determining a marching direction based on the information extracted by the parallel region extraction unit. Full support for these amendments can be found in the specification and outlined in Figure 10. Furthermore, claim 1 has also been amended to correct some small grammatical errors. No new matter has been added to the application as a result of these amendments.

Applicant respectfully submits that these amendments distinguish independent claim 1 from *Suri et al.* and provides benefits to the medical image processing apparatus not contemplated or disclosed by *Suri et al.* Therefore, applicant respectfully submits, and will endeavor to set forth, that independent claim 1 is patentably distinct over *Suri et al.* Specifically, *Suri et al.* does not disclose, teach, or suggest use of parallel regions to determine a marching direction for extracting information in subsequent regions. Although dependent claims 2-18 are patentably distinct, applicant respectfully submits these claims also

include each of the elements recited in independent claim 1. Therefore, applicant submits these claims have also been placed in a position for allowance.

Nevertheless, dependent claim 15 has also been amended to further differentiate over *Suri et al.* Specifically, claim 15 has been amended to recite that the region specifying unit specifies a continuous region at least partially within a predetermined three-dimensional region and detects a number of positions at which the continuous region and a surface of the predetermined three-dimensional region contact each other. The image clarifying unit then only clarifies the three-dimensional image when the number of positions of contact exceeds a predetermined value. Support for this amendment can be found in the specification and is outlined in Figure 33. *Suri et al.* does not disclose, teach, or suggest use these limitations. Therefore, it is respectfully suggested that dependent claim 15 is allowable on its own merits, despite its dependency on the novel and non-obvious claim 1.

Independent claim 19 has been amended to correct for proper antecedent basis as noted by the Examiner. Specifically, claim 19 has been amended to recited “a region specifying unit” instead of “said regions specifying unit.” Claim 19 has also been amended to correct other grammatical errors.

Independent claim 19 has further been amended in similar fashion to the amendments made in claim 1. As such, claim 19 now recites in part, “a step of specifying a first parallel region and a second parallel region along the target vessel at each of said positions wherein the parallel regions are perpendicular with each other and perpendicular with the planar region at each position”, “a step of extracting information on the tubular tissue in each of the plurality of specified orthogonal regions and in each of the specified parallel regions”, and “a step of determining the marching direction along said target vessel based on the information on the tubular tissue extracted from each of the specified parallel regions.”

As set forth above, with respect to claim 1, *Suri et al.* fails to disclose, teach, or suggest these steps. Accordingly, applicant respectfully submits that independent claim 19 as presently amended is patentably distinct over the method disclosed in *Suri et al.* Although dependent claims 20-36 are patentably distinct, applicant respectfully submits these claims also include each of the elements recited in independent claim 19. Therefore, applicant submits these claims have also been placed in a position for allowance.

Applicant further submits that the Examiner's rejection under 35 USC §103(a) over *Suri et al.* is now moot because *Suri et al.* lacks all of the elements recited in independent claims 1 and 19.

Applicant respectfully submits that the present application has now been placed in a position for allowance. This allowance is respectfully requested.

Respectfully Submitted,

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